AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising the steps of:

identifying a parameter associated with a data packet transported across the network;

measuring the parameter after the data packet is transported across the network; and

enabling bandwidth optimization of the network bandwidth when said measured parameter differs from a predetermined value, wherein enabling bandwidth optimization includes ~~reducing the size of voice packets transported in the network~~ at least a one of reconfiguring a switching matrix within the network and reducing a number of channels in the network.

2. (Currently Amended) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising:

first and second PBX cabinets interconnected in a local area network configuration for sending and receiving data packets;

a register in connection with at least one of said cabinets for storing a value associated with one or more packets transported across the network;

a comparator for comparing said stored value with a predetermined value; and

an optimization mechanism for adjusting the bandwidth of the network when said stored value differs from a predetermined value, and wherein adjusting the bandwidth includes ~~reducing~~

~~the size of voice packets transported~~ at least a one of reconfiguring a switching matrix within the PBX network and reducing a number of channels in the PBX network.

3. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 1, wherein:

said parameter comprises a sequence number associated with the payload portion of said data packet.

4. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 1, wherein:

said parameter comprises measurement of the difference in arrival times of packets sent across the network and back between a first packet and a second packet.

5. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 1, wherein:

said parameter comprises measurement of the difference in arrival times of packets sent across the network and back between the average value of arrival times of a group of packets and a second packet.

6. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 3, further comprising the substep of:

storing the sequence numbers of data packets in a register.

7. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 6 further comprising the substep of:

storing sequence numbers associated with successive data packets in the register.

8. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 7 further comprising the substep of:

monitoring the sequence of sequence numbers associated with successive data packets stored.

9. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 8 further comprising the substep of:

incrementing a counter in the register by a count of one when the sequence numbers of successive data packets stored are in sequential order; and

incrementing the counter by a count greater than one when the sequence numbers of successive data packets stored are out of sequential order.

10. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 9, further comprising the substep of:

initiating bandwidth optimization when said counter count is incremented by a count greater than one.

11. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 10, wherein:

said bandwidth optimization comprises static optimization.

12. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 11, wherein:

said static optimization comprises limiting the number of channels available on the network.

13. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 10, wherein:

said bandwidth optimization comprises adaptive optimization.

14. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 13, wherein:

said adaptive optimization comprises the step of determining which channels are physically represented by cards connected to a PBX network cabinet.

15. (Original) A method of dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 13, wherein:

said adaptive optimization comprises the step of determining whether a channel is inactive and re-mapping an active channel to an available inactive one.

16.-19. (Canceled)

20. (Currently Amended) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising:

a parameter identifying mechanism for identifying a parameter associated with a data packet transported across the network;

a parameter measuring device for measuring the parameter after the data packet is transported across the network; and

an optimization enabling device for optimizing the bandwidth of the network when said measured parameter differs from a predetermined value, and wherein optimizing the bandwidth includes ~~reducing the size of voice packets transported in the network~~ at least a one of reconfiguring a switching matrix within the network and reducing a number of channels in the network.

21. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 20, wherein:

said parameter comprises a sequence number associated with the payload portion of said data packet.

22. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 20, wherein:

said parameter is derived from measurement of the difference in arrival times of packets set across the network and back between a first packet and a second packet.

23. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain Quality of Service level in the network as set forth in claim 20, wherein:

said parameter is derived from measurement of the difference in arrival times of packets sent across the network and back between the average value of arrival times of a group of packets and a second packet.

24. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in a network as set forth in claim 21, wherein:

sequence numbers of the data packets are stored in a register.

25. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in a network as set forth in claim 24 wherein:

sequence numbers associated with successive data packets are stored in the register.

26. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 25 wherein:

the sequence of sequence numbers associated with stored successive data packets is monitored.

27. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 26 wherein:

a counter in the register is incremented by a count of one when the sequence numbers of successive data packets stored are in sequential order; and

the counter is incremented by a count greater than one when the sequence numbers of successive data packets stored are out of sequential order.

28. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 27, wherein:

bandwidth optimization is initiated when the counter count is incremented by a count greater than one.

29. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 28, wherein:

bandwidth optimization comprises static optimization.

30. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 29, wherein:

static optimization comprises limiting the number of channels available on the network.

31. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 28, wherein:

bandwidth optimization comprises adaptive optimization.

32. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 29, further comprising:

adaptive optimization apparatus which determines which channels are physically represented by cards connected to a PBX network cabinet.

33. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 29, wherein:

adaptive optimization determines whether a channel is inactive and re-maps an active channel to an available inactive one.

34. (Previously Presented) Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 2, wherein:

said value comprises measurement of the difference in arrival times of packets sent across the network and back between a first packet and a second packet.